UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
08/721,447	09/27/96	PINSKY	51917/JPW/JM

18M1/1028

JOHN P WHITE
COOPER AND DUNHAM
1185 AVENUE OF THE AMERICAS
NEW YORK NY 10036

EXAMINER	
GAMBEL, P	
ART UNIT	**PAPER NUMBER**
1806	7

DATE MAILED: 10/28/97

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☑ Responsive to communication(s) filed on 7/4/97

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☑ Claim(s) 1-45 is/are pending in the application.
Of the above, claim(s) 1-28, 39-45 is/are withdrawn from consideration.
☐ Claim(s) _____ is/are allowed.
☑ Claim(s) 29-38 is/are rejected.
☐ Claim(s) _____ is/are objected to.
☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☑ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
☐ The specification is objected to by the Examiner.
☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.
☐ received in Application No. (Series Code/Serial Number) _____.
☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☑ Notice of Reference Cited, PTO-892
☑ Information Disclosure Statement(s), PTO-1449, Paper No(s). 5
☐ Interview Summary, PTO-413
☑ Notice of Draftperson's Patent Drawing Review, PTO-948
☐ Notice of Informal Patent Application, PTO-152

–SEE OFFICE ACTION ON THE FOLLOWING PAGES–

1. Applicant's amendment, filed 7/21/97 (Paper No. 6), is acknowledged. Claims 29-31 and 33 have been amended.

Claims 1-45 are pending.

2. Applicant's election with traverse of Group III (claims 29-38) in Paper No. 6 is acknowledged. The traversal is on the ground(s) that the examiner has found the inventions to be distinct without also finding to be independent inventions and argues that inventions must be distinct and independent.. This is not found persuasive because this is not true, that is, the MPEP clearly shows that the inventions must be independent (see MPEP 802.01, 806.04, 808.01) OR distinct as claimed (see MPEP 806.05-806.05(I))) and because the inventions require non-coextensive searches. Also, applicant is relying upon the general therapeutic endpoint of treating ischemia alone. In contrast as set forth in the previous Office Action (Paper No. 4); the Inventions require different ingredients, process steps and endpoints and the species are distinct because their structures and modes of action are different inventions. Therefore they are novel and unobvious in view of each other and are patentably distinct. Also, it is noted that applicant's specification is set forth as distinct and independent inventions as it relates to the different products to treat ischemia.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-28 and 39-45 are withdrawn from further consideration by the examiner, 37 C.F.R. § 1.142(b) as being drawn to a nonelected invention. Election was made **without** traverse in Paper No. 9.

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. Applicant should restrict the title to the claimed invention, including the use of Factor IX.

4. Formal drawings and photographs have been submitted which fail to comply with 37 CFR 1.84. Please see the enclosed form PTO-948.
Applicant is reminded to change the Brief Description of the Drawings in accordance with these changes.

5. The application is required to be reviewed and all spelling, TRADEMARKS, and like errors corrected.

Trademarks should be capitalized or accompanied by the ™ or ® symbol wherever they appear and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the trademarks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

6. The following is a quotation of the first paragraph of 35 U.S.C. § 112:
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. The specification is objected to and claim 33 is rejected under 35 U.S.C. § 112, first paragraph, because the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention. In evaluating the facts of the instant case, the following is noted:

Applicant has not provided sufficient guidance and direction nor objective evidence that the skilled artisan can deliver a therapeutic effective amount of Factor IX in an aerosol, oral or topical carrier in treating ischemic disorders. Ischemia comprising treating vascular disorders and it would not be predictable that one could deliver a therapeutic effect amount in such disorders other than intravascular routes of administration. In the absence of objective evidence to the contrary; aerosol, oral and topical carriers and means of delivery are not enabled for treating ischemia.

Pharmaceutical therapies in the absence of in vivo clinical data are unpredictable for the following reasons; (1) the protein may be inactivated before producing an effect, i.e. such as proteolytic degradation, immunological inactivation or due to an inherently short half-life of the protein; (2) the protein may not reach the target area because, i.e. the protein may not be able to cross the mucosa or the protein may be adsorbed by fluids, cells and tissues where the protein has no effect; and (3) other functional properties, known or unknown, may make the protein unsuitable for in vivo therapeutic use, i.e. such as adverse side effects prohibitive to the use of such treatment. See page 1338, footnote 7 of Ex parte Aggarwal, 23 USPQ2d 1334 (PTO Bd. Pat App. & Inter. 1992).

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

10. Claims 29-36 are rejected under 35 U.S.C. § 102(b) as being anticipated by Moller et al. (CA 2,141,642). Moller et al. teach the use factor IX which does not show coagulation activity as a method to treat thrombotic diseases encompassed by the claimed methods (see entire document, including pages 1-2), Applicant is reminded that no more of the reference is required than that it sets forth the substance of the invention. The claimed functional limitations addressed by the applicant would be inherent properties of the referenced treatment of thrombotic disease resulting from life-threatening bleeding complications with factor IX.

11. Claims 29-37 are rejected under 35 U.S.C. § 103 as being unpatentable over Moller et al. (CA 2,141,642) in view of standard methods of inactivation as acknowledged on page 17 of the instant specification and in view of known ischemic disorders as acknowledged on page 16 of the instant specification. The instant claims are drawn to treating ischemic disorders with inactivated Factor IX.

Moller et al. teach the use factor IX which does not show coagulation activity as a method to treat thrombotic diseases encompassed by the claimed methods (see entire document, including pages 1-2), By teaching factor IX with no coagulation activity, it would have been obvious to ordinary artisan to inactivate factor IX by known methods to generate a factor IX that does not have coagulation activity but that can interfere with thrombosis. By teaching treating thrombotic diseases encompassed by the claimed methods, it would have been obvious to treat other ischemic disorders encompassed by the claimed methods because inhibiting the coagulation cascade and thrombosis as taught by Moller et al. , it would have been expected to inhibit the vascular complications and thrombosis associated with ischemia associated with the conditions set forth in claims 36-37. It was known at the time the invention was made that ischemia or deprivation of oxygen was due, in part, to coagulation or thrombosis and that the treatment of such conditions relied upon anti-coagulants. The dosage range and routes of administration (intravascular) were all known at the time the invention was made and would have depended upon the needs of the subject for a particular ischemia disorder.

One of ordinary skill in the art at the time the invention was made would have been motivated to select factor IX as an anticoagulant to treat ischemic. From the teachings of the reference and of that known and practiced by the ordinary artisan, it was apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

12. No claim is allowed.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip Gambel whose telephone number is (703) 308-3997. The examiner can normally be reached Monday through Thursday from 7:30 am to 6:00 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lila Feisee can be reached on (703) 308-2731. Any inquiry of a general nature or relating to the status of this application should be directed to the Group 1800 receptionist whose telephone number is (703) 308-0196.

Papers related to this application may be submitted to Group 1800 by facsimile transmission. Papers should be faxed to Group 1800 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Fax Center telephone number is (703) 305-3014 or (703) 308-4242.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to **[lila.feisee@uspto.gov]**.

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Phillip Gambel, Ph.D.
Patent Examiner
Group 1800
October 27, 1997

Lila Feisee
Supervisory Patent Examiner
Group 1800